

## 17 Demersal elasmobranchs at the Faroe Islands

### 17.1 Ecoregion and stock boundaries

The elasmobranch fauna off the Faroe Islands (ICES divisions 5.b1 and 5.b2) is little studied, though it is likely to be similar to that occurring in the northern North Sea and off NW Scotland and Iceland.

Skates recorded in the area include Arctic skate *Amblyraja hyperborea*, starry ray (thorny skate) *Amblyraja radiata*, common skate complex, long-nosed skate *Dipturus oxyrinchus*, sandy ray *Leucoraja circularis*, shagreen ray *Leucoraja fullonica*, cuckoo ray *Leucoraja naevus*, spotted ray *Raja montagui*, thornback ray *Raja clavata*, round skate *Rajella fyllae* and sailray *Rajella lintea* (formerly *Dipturus linteus*).

Demersal sharks include spurdog *Squalus acanthias* (Section 2), several deep-water species (leaf-scale gulper shark *Centrophorus squamosus*, black dogfish *Centroscyllium fabricii*, birdbeak dogfish *Deania calcea*, longnose velvet dogfish *Centroselachus crepidater*, smallmouth velvet dogfish *Scymnodon obscurus* (sections 2 and 5), Greenland shark *Somniosus microcephalus* (Section 24) and various scyliorhinids, such as mouse catshark *Galeus murinus* and black-mouth catshark *Galeus melastomus* (Section 25).

Several chimaeras also occur in the area: rabbitfish *Chimaera monstrosa*, large-eyed rabbitfish *Hydrolagus mirabilis*, narrownose chimaera *Harriotta raleighana* and spearnose chimaera *Rhinichimaera atlantica*.

Stock boundaries are not known for the species in this area. Neither are the potential movements of species between the coastal and offshore areas. Further investigations are necessary to determine potential migrations or interactions of elasmobranch populations within this ecoregion and neighbouring areas.

### 17.2 The fishery

#### 17.2.1 History of the fishery

Since 1973, seven countries have reported landings of demersal elasmobranch from Division 5.b, relating mostly to skates. Scottish vessels reported the largest portion of landings in earlier years, but Faroese vessels have reported the greatest quantities since the 1980s. These include trawlers and, to a lesser extent, longliners and gillnetters. Norwegian longliners fishing in this area target ling, tusk and cod. UK vessels include a small number of larger Scottish trawlers that occasionally obtain quota to fish in Faroese waters, and target gadoids and deeper water species. French vessels fishing in this area are probably from the same fleet that execute the mixed deep-water and shelf fishery west of the British Isles. Demersal elasmobranchs likely represent a minor to moderate bycatch in these fisheries.

In 2007, a Russian longliner fished for deep-water sharks in the Faroese Fishing Zone (FFZ) and on the Reykjanes Ridge. The total catch of the elasmobranchs in those and other NEA areas amounted to 483 t (Vinnichenko, 2008; summarised in ICES, 2010).

#### 17.2.2 The fishery in 2020

No new information.

### **17.2.3 ICES advice applicable**

ICES does not provide advice on the skate stocks in this area.

### **17.2.4 Management applicable**

The majority of the area is managed by the Faroes through fishing effort-based system which restricts fishing days for demersal gadoids. Some EU vessels have been able to gain access to the Faroes EEZ where they have been managed under individual quotas for the main target species.

## **17.3 Catch data**

### **17.3.1 Landings**

Landings of skates, not usually identified to species level, are summarised in Table 17.1. French reported landings of common skate complex are unlikely to represent the entire catch, as an unknown quantity is included in the category of unidentified skates and rays. Total skate landings are shown in Figure 17.1.

### **17.3.2 Discards**

The amounts of skates and demersal sharks discarded has not been estimated.

### **17.3.3 Quality of catch data**

Species-specific information for commercial catches is incomplete.

### **17.3.4 Discard survival**

No data available for the elasmobranchs taken in commercial fisheries in this area.

## **17.4 Commercial catch composition**

All skates in Division 5.b, with the exception of French landings, were reported as '*Raja rays nei*' before 2008 (see Table 17.1). There were no port sampling data available to estimate species composition. It is likely that catches include common skate complex, *L. fullonica*, *R. clavata* and *A. radiata*. No data regarding size composition or sex ratio from commercial landings were available.

## **17.5 Commercial catch and effort data**

No information available to WGEF.

## **17.6 Fishery-independent surveys**

No survey data were available. Magnussen (2002) summarized the demersal fish assemblages from the Faroe Bank, based on the analysis of routine survey data collected by the RV *Magnus Heinason* since 1983. Data on elasmobranchs taken in these surveys are summarized in Table 17.2.

A more detailed analysis of the demersal elasmobranchs taken in Faroese surveys is still to be undertaken.

## **17.7 Life-history information**

No new information. Trawl survey data may provide useful information on catches of viable skate egg cases and/or on nursery grounds.

## **17.8 Exploratory assessments**

No exploratory assessments have been undertaken.

## **17.9 Stock assessment**

No assessments have been conducted due to insufficient data. Analyses of survey data may allow the general status of the more frequent species to be evaluated.

## **17.10 Quality of assessments**

No assessments have been conducted.

## **17.11 Reference points**

No reference points have been proposed for any of these species.

## **17.12 Conservation considerations**

See sections 15.12 and 18.12.

## **17.13 Management considerations**

Total international reported landings of skates declined from 1973–2003 but increased to above the average of the time-series in 2004–2006. Since then, landings declined below the long-term average again and are continuing to decrease in the most recent years. Without detailed information on the fisheries, (including better separation of species, quantities discarded, sizes caught, etc.), it is not possible to provide information on exploitation patterns or the status of stocks.

The elasmobranch fauna off the Faroe Islands is little studied, though it is likely to be somewhat similar to that occurring in the northern North Sea and off Iceland. Further studies to describe the demersal elasmobranch fauna of this region and to conduct preliminary analyses of fishery-independent survey data are required.

The common skate complex has been demonstrated to be vulnerable to exploitation and has been near-extirpated in the Irish and North Seas, further investigation on the common skate complex and other skates in the Faroe Islands is required, including the data analysis from fishery-independent sources.

## 17.14 References

- ICES. 2010. Report of the Working Group on Elasmobranch Fishes (WGEF), 22–29 June 2010, Horta, Portugal. ICES CM 2010/ACOM:19. 558 pp.
- ICES. 2012. Report of the Working Group on Elasmobranch Fishes (WGEF), 19–26 June 2012, Lisbon, Portugal. ICES CM 2011/ACOM:19. 551 pp.
- Magnussen, E. 2002. Demersal fish assemblages of the Faroe Bank: Species composition, distribution, biomass spectrum and diversity. *Marine Ecology Progress Series*, 238: 211–225.
- Vinnichenko, V.I. 2008. Russian deep-sea investigations and fisheries in the Northeast Atlantic in 2007. Working Document for the Working Group on the Biology and Assessment of Deep-sea Fisheries Resources, ICES, 9 pp.

### Electronic references

- ICES. 2016. Official Nominal Catches 2006–2014. Version 18-06-2016. Accessed 18-06-2016 via <http://ices.dk/marine-data/dataset-collections/Pages/Fish-catch-and-stock-assessment.aspx> ICES, Copenhagen.
- <http://www.hagstova.fo> Accessed 23<sup>th</sup> June 2020.

**Table 17.1. Demersal elasmobranchs at the Faroe Islands. Reported landings of skates from the Faroes area (Division 5.b). Data were updated with nominal landings from ICES database (ICES, 2017) for years 2006–2015 and also contain national landings data provided to the WG. Faroese landings for 1990–2018 were extracted from Faroese national statistics database available on [www.hagstova.fo](http://www.hagstova.fo). \*Total catch (live weight).**

Species	Country	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
<i>Raja rays nei</i>	Faroe Islands*	150	95	107	136	164	201	202	198	135	221	211	281	277
	France	0	0	30	57	159	7	3	0	4	2	0	0	0
	Germany	47	33	36	15	23	55	14	7	1	3	3	3	1
	Netherlands	0	0	1	1	0	0	0	0	0	0	0	0	0
	Norway	29	27	37	42	46	64	37	18	21	13	32	35	14
	UK	384	238	250	276	174	104	108	68	11	32	20	1	1
Common skate complex	France	0	0	0	0	0	5	0	0	0	0	0	0	0
<i>Leucoraja naevus</i>	France	0	0	0	0	0	0	1	0	0	0	0	0	0
<i>Raja clavata</i>	France	0	0	0	0	0	0	10	0	0	1	6	23	38
	Total	610	393	461	527	566	436	375	291	172	272	272	343	331

Table 17.1 (continued). Demersal elasmobranchs at the Faroe Islands. Reported landings of skates from the Faroes area (Division 5.b). Data were updated with nominal landings from ICES database (ICES, 2017) for years 2006–2020 and also contain national landings data provided to the WG. Faroese landings for 1990–2018 were extracted from Faroese national statistics database available on [www.hagstova.fo](http://www.hagstova.fo). \*Total catch (live weight).

Species	Country	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<i>Raja rays nei</i>	Denmark	0	1	0	0	0	0	0	0	0	0	0	0	0
	Faroe Islands*	258	171	92	136	144	207	256	203	167	220	165	185	144
	France	1	6	5	8	5	0	0	0	0	1	1	2	0
	Germany	1	1	0	0	0	1	1	1	3	0	0	0	0
	Norway	22	11	29	84	96	81	37	75	20	14	60	14	45
	UK	0	2	0	1	2	1	5	13	8	7	4	11	7
Common skate complex	France	5	6	7	13	12	5	1	0	0	1	2	3	0
<i>Leucoraja naevus</i>	France	0	2	2	0	0	0	0	0	0	0	0	0	0
<i>Dipturus oxyrinchus</i>	France	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Raja clavata</i>	France	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Raja montagui</i>	France	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dasyatis pastinaca</i>	France	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Leucoraja circularis</i>	France	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Leucoraja fullonica</i>	France	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	287	200	135	242	259	295	300	292	198	243	232	215	196

**Table 17.1 (continued). Demersal elasmobranchs at the Faroe Islands. Reported landings of skates from the Faroes area (Division 5.b). Data were updated with nominal landings from ICES database (ICES, 2017) for years 2006–2020 and also contain national landings data provided to the WG. Faroese landings for 1990–2018 were extracted from Faroese national statistics database available on [www.hagstova.fo](http://www.hagstova.fo). \*Total catch (live weight).**

Species	Country	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<i>Raja rays nei</i>	Faroe Islands*	175	0	75	25	98	272	274	238	185	179	150	177	182	198	209
	France	2	0	0	1	5	10	9	20	10	7	6	0	0	0	0
	Germany	1	1	0	0	2	1	0	0	0	0	0	0	0	0	0
	Norway	45	50	21	15	5	0	12	10	16	9	4	11	0	0	0
	UK	6	35	27	12	8	20	8	2	2	2	1	3	0	0	0
Common skate complex	Norway	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0
	France	4	2	2	2	3	5	2	3	1	0	0	0	0	0	0
	UK	0	0	0	0	0	0	0	0	0	0	4	5	0	0	0
<i>Leucoraja naevus</i>	France	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	UK	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
<i>Dipturus oxyrinchus</i>	France	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
<i>Raja clavata</i>	France	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	UK	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
<i>Raja montagui</i>	France	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<i>Dasyatis pastinaca</i>	France	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Leucoraja circularis</i>	France	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Leucoraja fullonica</i>	France	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	UK	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0
<i>Rostroraja alba</i>	France	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	UK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	233	88	128	55	121	308	305	273	214	201	168	200	182	199	214

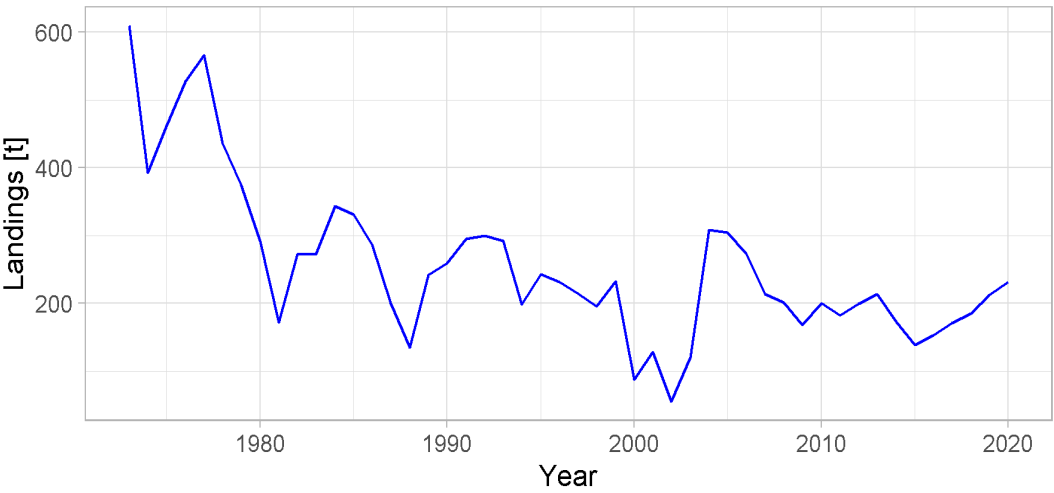
**Table 17.1 (continued). Demersal elasmobranchs at the Faroe Islands. Reported landings of skates from the Faroes area (Division 5.b). Data were updated with nominal landings from ICES database (ICES, 2017) for years 2006–2020 and also contain national landings data provided to the WG. Faroese landings for 1990–2018 were extracted from Faroese national statistics database available on [www.hagstova.fo](http://www.hagstova.fo). \*Total catch (live weight). + : <0.5 tonnes. Data for 2020 are preliminary.**

Species	Country	2014	2015	2016	2017	2018	2019	2020
<i>Raja rays nei</i>	Faroe Islands*	150	114	126	139	138	170	182
	France	0	5	0	2	6	5	8
	Germany	0	0	0				
	Norway	19	13	23	22	40	30	41
	UK	0	0	0				
Common skate complex	Norway	0	0	0				
	France	0	0	0	+	+		+
	UK	0	1	1	5	1	1	
<i>Leucoraja naevus</i>	France	0	0	0	+		+	+
	UK	0		3	2			+
<i>Raja clavata</i>	France	1	0	0	+		+	+
	UK	0	1	1	+			
<i>Raja montagui</i>	France	3	5	0	1		+	
	UK				+			
<i>Dasyatis pastinaca</i>	France	0	0	0				
<i>Leucoraja circularis</i>	France	0	0	0				
<i>Leucoraja fullonica</i>	France	0	0	0	+	+	+	+
	UK	0	0	0				
<i>Rostroraja alba</i>	France	0	0	0			+	
	Norway						7	1
	Total	173	139	153	171	185	213	232



**Table 17.2. Demersal elasmobranchs at the Faroe Islands. Elasmobranchs caught on the Faroe Bank during bottom-trawl surveys (1983–1996) by depth band. Symbols indicate frequency of occurrence in hauls (\*\*\*: 60–100% of hauls, \*\*: 10–60% of hauls, \*: 3–10% of hauls, + : <3% of hauls). Adapted from Magnussen (2002).**

Species	Depth						Total
	<100 m	100–200 m	200–300 m	300–400 m	400–500 m	>500 m	
<i>Galeus melastomus</i>	–	+	*	*	**	**	*
<i>Galeorhinus galeus</i>	–	+	–	–	–	*	+
<i>Squalus acanthias</i>	–	*	*	**	*	**	*
<i>Etmopterus spinax</i>	–	+	–	–	*	**	*
<i>Centroscyllium fabricii</i>	–	–	–	–	*	–	+
<i>Amblyraja radiata</i>	–	–	–	–	–	**	+
Common skate complex	–	*	*	–	–	**	*
<i>Leucoraja fullonica</i>	–	+	+	–	–	*	+
<i>Leucoraja circularis</i>	–	–	*	–	–	–	+
<i>Rajella fyllae</i>	–	+	–	–	–	–	+
<i>Rajella lintea</i>	*	+	–	–	–	–	+
<i>Raja clavata</i>	–	+	–	–	–	–	+
<i>Chimaera monstrosa</i>	*	*	**	***	***	***	**



**Figure 17.1. Demersal elasmobranchs at the Faroe Islands (Subarea 5.b). Reported landings of skates (1973–2020) based on ICES database (ICES, 2020), national landings data and Faroese national statistics database ([www.hagstova.fo](http://www.hagstova.fo)).**